

CLAIMS

- 5 1. A dual-function treading exerciser comprising:
a lower body exerciser and an upper
body exerciser, said upper body exerciser including;
a frame joined to the lower body exerciser; and
a movable handle assembly including a pair of pulling devices mounted on said
10 frame, and a rotary shaft journalled on said frame, each of said pulling
devices including, a pulley disposed
on said frame, a pull cord wound on
said pulley, a handgrip fastened to an end of said pull cord and movable
rearwardly to unwind said pull cord from said pulley, and a biasing unit
15 for biasing said pull cord to wind around said pulley when said cord is
pulled rearwardly and is subsequently released.
2. The dual-function exerciser of claim 1, wherein said lower body
exerciser comprises:
a treading platform; and
20 a continuous tread extending around said platform.
3. The dual-function exerciser of claim 1, wherein said movable handle
assembly is joined to a front portion of said frame.
4. The dual-function exerciser of claim 1, wherein said frame extends
upwardly from a front portion of said dual-function exerciser.

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5. The dual-function exerciser of claim 1, wherein said frame extends upwardly from a front portion of said dual-function exerciser, and said movable handle assembly is joined to an upper portion of said frame.

6. The dual-function exerciser of claim 1, and further comprising fixed handles, and wherein said movable handle assembly is disposed substantially higher than said fixed handles.

7. The dual-function exerciser of claim 1, wherein said biasing unit of each of said pulling devices includes a spring member biased to rotate in a predetermined direction.

8. The dual-function exerciser of claim 7, wherein said spring member is a spiral spring that is fastened to a housing at one end and to the respective one of said pulleys at the other end.

9. The dual-function treading exerciser of claim 1, wherein said movable handle assembly further includes:

a flywheel assembly mounted on said rotary shaft;
a unidirectional bearing disposed between said rotary shaft and each of said pulleys so as to rotate said rotary shaft synchronously with said pulleys only when said pulleys rotate in a direction, in which said pull cords are unwound from said pulleys; and
an adjustable magnetic resistance device disposed adjacent to said flywheel assembly so as to provide resistance to rotation of said flywheel assembly.

10. The dual-function treading exerciser of claim 9, wherein said flywheel assembly includes a flywheel, and a pair of magnetically conductive rings disposed respectively and on opposite sides of said flywheel, said adjustable magnetic resistance device including:

- 5 a positioning seat fixed on said frame and having two spaced-apart parallel sliding rails;
- a threaded shaft journalled on said positioning seat and having an externally threaded portion; and
- a magnet seat including a U-shaped body and two spaced-apart parallel sliding
10 plates that are connected to said U-shaped body and that are disposed respectively and slidably along said sliding rails, said body having two opposite side walls which are provided respectively with two aligned magnet units, between which said flywheel assembly is disposed, and a connecting wall which interconnects said side walls
15 and which is formed with a threaded hole that engages said threaded shaft so as to move said U-shaped body toward and away from said flywheel when said threaded shaft is rotated relative to said positioning seat, thereby adjusting magnitude of the resistance.

11. The dual-function treading exerciser of claim 10, wherein said magnetic resistance device further includes:

a motor disposed on said frame and provided with a motor shaft; and

5 a gear sleeved on said motor shaft and engaging said externally threaded portion of said threaded shaft so as to transfer rotation of said motor shaft to said threaded shaft.

12. A dual-function treading exerciser comprising:

a lower body exerciser and an upper body exerciser, said upper body exerciser
10 including;

a frame joined to the lower body exerciser; and

a movable handle assembly including a pair of pulling devices mounted on said frame, and a rotary shaft journalled on said frame, each of said pulling devices including, a chamber, a pulley disposed
15 in said chamber, a pull cord wound on said pulley, a handgrip fastened to an end of said pull cord and movable rearwardly to unwind said pull cord from said pulley, and a biasing unit for biasing said pull cord to wind around said pulley when said cord is pulled rearwardly and is subsequently released.

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13. The dual-function exerciser of claim 12, wherein said lower body exerciser comprises:

a treading platform; and

a continuous tread extending around said platform.

5 14. The dual-function exerciser of claim 12, wherein said movable handle assembly is joined to a front portion of said frame.

15. The dual-function exerciser of claim 12, wherein said frame extends upwardly from a front portion of said dual-function exerciser.

10 16. The dual-function exerciser of claim 12, wherein said frame extends upwardly from a front portion of said dual-function exerciser, and said movable handle assembly is joined to an upper portion of said frame.

17. The dual-function exerciser of claim 12, and further comprising fixed handles, and wherein said movable handle assembly is disposed substantially higher than said fixed handles.

15 18. The dual-function exerciser of claim 12, wherein said biasing unit of each of said pulling devices includes a spring member biased to rotate in said chamber in a predetermined direction.

19. The dual-function exerciser of claim 18, wherein said spring member is a spiral spring that is fastened to a housing at one end and to the respective one of said
20 pulleys at the other end.

20. The dual-function treading exerciser of claim 1, wherein said movable handle assembly further includes:

a flywheel assembly mounted on said rotary shaft;

a unidirectional bearing disposed between said rotary shaft and each of said

5 pulleys so as to rotate said rotary shaft synchronously with said pulleys only when said pulleys rotate in a direction, in which said pull cords are unwound from said pulleys; and

an adjustable magnetic resistance device disposed adjacent to said flywheel

assembly so as to provide resistance to rotation of said flywheel

10 assembly.

21. The dual-function treading exerciser of claim 20, wherein said flywheel assembly includes a flywheel, and a pair of magnetically conductive rings disposed respectively and on opposite sides of said flywheel, said adjustable magnetic resistance device including:

- 5 a positioning seat fixed on said frame and having two spaced-apart parallel sliding rails;
- a threaded shaft journalled on said positioning seat and having an externally threaded portion; and
- a magnet seat including a U-shaped body and two spaced-apart parallel sliding
10 plates that are connected to said U-shaped body and that are disposed respectively and slidably along said sliding rails, said body having two opposite side walls which are provided respectively with two aligned magnet units, between which said flywheel assembly is disposed, and a connecting wall which interconnects said side walls
15 and which is formed with a threaded hole that engages said threaded shaft so as to move said U-shaped body toward and away from said flywheel when said threaded shaft is rotated relative to said positioning seat, thereby adjusting magnitude of the resistance.

22. The dual-function treading exerciser of claim 21, wherein said magnetic resistance device further includes:

a motor disposed on said frame and provided with a motor shaft; and
a gear sleeved on said motor shaft and engaging said externally

5 threaded portion of said threaded shaft so as to transfer rotation of said motor shaft to said threaded shaft.

23. A dual-function treading exerciser comprising:

a lower body exerciser and an upper body exerciser, said upper body exerciser including;

10 a frame joined to the lower body exerciser; and

a movable handle assembly including a pair of pulling devices mounted on said

frame to operate independently of one another to enable a plurality of
upper body exercises, and a rotary shaft journaled on said frame, each of
said pulling devices including, a pulley disposed

15 on said frame, a pull cord wound on said pulley, a handgrip fastened to
an end of said pull cord and movable rearwardly to unwind said pull cord
from said pulley, and a biasing unit for biasing said pull cord to wind
around said pulley when said cord is pulled rearwardly and is
subsequently released.

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24. The dual-function exerciser of claim 23, wherein said lower body exerciser comprises:

a treading platform; and

a continuous tread extending around said platform.

5 25. The dual-function exerciser of claim 23, wherein said movable handle assembly is joined to a front portion of said frame.

26. The dual-function exerciser of claim 23, wherein said frame extends upwardly from a front portion of said dual-function exerciser.

27. The dual-function exerciser of claim 23, wherein said frame extends
10 upwardly from a front portion of said dual-function exerciser, and said movable handle assembly is joined to an upper portion of said frame.

28. The dual-function exerciser of claim 23, and further comprising fixed handles, and wherein said movable handle assembly is disposed substantially higher than said fixed handles.

15 29. The dual-function exerciser of claim 23, wherein said biasing unit of each of said pulling devices includes a spring member biased to rotate in a predetermined direction.

30. The dual-function exerciser of claim 29, wherein said spring member is a spiral spring that is fastened to a housing at one end and to the respective one of said
20 pulleys at the other end.

31. The dual-function treading exerciser of claim 23, wherein said movable handle assembly further includes:

a flywheel assembly mounted on said rotary shaft;

a unidirectional bearing disposed between said rotary shaft and each of said

5 pulleys so as to rotate said rotary shaft synchronously with said pulleys only when said pulleys rotate in a direction, in which said pull cords are unwound from said pulleys; and

an adjustable magnetic resistance device disposed adjacent to said flywheel

assembly so as to provide resistance to rotation of said flywheel

10 assembly.

32. The dual-function treading exerciser of claim 31, wherein said flywheel assembly includes a flywheel, and a pair of magnetically conductive rings disposed respectively and on opposite sides of said flywheel, said adjustable magnetic resistance device including:

- 5 a positioning seat fixed on said frame and having two spaced-apart parallel sliding rails;
- a threaded shaft journalled on said positioning seat and having an externally threaded portion; and
- a magnet seat including a U-shaped body and two spaced-apart parallel sliding
10 plates that are connected to said U-shaped body and that are disposed respectively and slidably along said sliding rails, said body having two opposite side walls which are provided respectively with two aligned magnet units, between which said flywheel assembly is disposed, and a connecting wall which interconnects said side walls
15 and which is formed with a threaded hole that engages said threaded shaft so as to move said U-shaped body toward and away from said flywheel when said threaded shaft is rotated relative to said positioning seat, thereby adjusting magnitude of the resistance.

33. The dual-function treading exerciser of claim 32, wherein said magnetic resistance device further includes:

a motor disposed on said frame and provided with a motor shaft; and

a gear sleeved on said motor shaft and engaging said externally

5 threaded portion of said threaded shaft so as to transfer rotation of said motor shaft to said threaded shaft.